
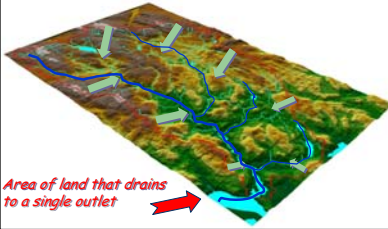


## Sucker River Watershed Kick-off Meeting



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## What is a Watershed?



Area of land that drains to a single outlet

## Why is a watershed important?

- Like a healthy body keeps a person strong and alive, a healthy watershed keeps a river and the trout within thriving.



## Why did we pick the Sucker?

- Sucker River is in good shape now**  
(Assessment of Representative Lake Superior Basin Tributaries, 2002, MPCA)
  - Smart economic move to prevent future problems
- Goal: Protect Sucker into the future**
  - Think about your role in the Watershed
  - Ask questions
  - Take action

## Data

Definitions:  
DNR: Department of Natural Resources  
MPCA: Minnesota Pollution Control Agency

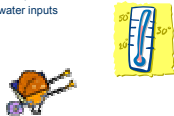
- Stream Management Plan** (DNR Fisheries)
  - Stream Management Plan states "A significant number of temperatures in the range of thermal stress for brook trout"
  - Habitat needs: "Restore native forest vegetation in stream buffer zones"
- Stream temperatures** (DNR: 2000-2002, MPCA: 2001-2003)
  - Stream is "on the edge" thermally
- Future?**
  - Other north shore streams...

## What this project:

- IS:**
  - Voluntary
  - Grant-funded
  - Pilot Project
  - Promote protection of the Sucker River through citizen actions
- ~~**ISN'T**~~
  - Regulatory
  - Political
  - Promote anything other than GOOD WATERSHED behavior

## Fragile System

- All North Shore streams have steep slopes
- Limited groundwater inputs
  - Protect stream during low-rain periods
  - Buffer stream from warm water inputs
- POTENTIAL IMPACTS:**
  - Temperature
  - Sediment



## Volume and Velocity


*QUANTITY is as important as QUALITY*

- Greater volume**
  - More and "bigger" floods
  - Cut down channels and destabilize streambanks
  - Increased nutrients and sediments in stream
- Greater velocity**
  - More erosion ability
  - Raise turbidity ("muckiness")
  - Reduce aquatic life in stream



## Increasing "V & V"

- Remove vegetation
- Add impervious surface
- Compact soils during construction



### Sediment *(def: soil, dirt, sand, clay)*

- Sources
  - Increased **volume** and **velocity** of water
  - Construction, road & driveway building
    - Especially on steep slopes
  - Removing riparian (stream-side) vegetation
    - Large Woody Debris
- Impacts
  - Fisheries habitat and food base
  - Expensive to clean out ditches




### Sediment Fills in Spaces Between Rocks



- ✓ No spaces for fish to spawn
- ✓ No invertebrate habitat
- ✓ Spaces for fish to lay eggs
- ✓ Invertebrates can live & hide

### Temperature *(def: warmer water)*




- Sources
  - Removing stream-side vegetation
    - Tree canopy needed for shade
  - Impervious surface
    - Driveways, rooftops, roads increase **volume** and **velocity**
- Impacts
  - Trout need cold temperatures to thrive

### Nutrients *(def: things plants need to live)*

- Sources
  - Can be transported with sediment
  - Improper, excess fertilizer applications
  - Septic systems
    - Maintenance important, saves system in long run
- Impacts
  - Too much aquatic plant growth
    - Take away trout habitat
    - Use up oxygen in stream


### How much will it take?

- How much the watershed can handle before the stream is pushed over the edge?
- Changes occur in small steps, ongoing, gradual-hard to see



**What can I do?**

### Consider Forest Stewardship planning



### Plant Native Trees and Vegetation

### Leave buffers between your yard and the stream


### Buffers: A Last Defense



**What can I do?**



### Limit use of fertilizer & pesticides on your lawn

### Recycle and Dispose of Household Waste and Chemicals Properly



**What can I do?**

### Minimize soil disturbance and land clearing during construction

What can I do?

Maintain septic systems



Culverts and ditches - don't dump waste

What can I do?

Avoid steep slopes (def. hills or ridges)

- Meander driveways ("S" shape), so water doesn't sheet down slope
  - Save township money
  - Saves you money and headaches too!



What can I do?

Deal with runoff on your property



Be an aware and active member of your watershed

Your Role Is Important



- Anything that happens on land affects the quality of the Sucker River



Benefits

- Maintain and protect the high quality of Sucker River
- Reduce problems, like erosion
- Improve wildlife habitat on your property
- Increase your land value
- Make a difference in your community

Now what?



What do you think will protect the Sucker River into the future?

What are actions watershed citizens could take to help protect the Sucker River?